

REDISCOVERY OF *CALLIRHOE PAPAVER* (MALVACEAE) IN ALABAMA (U.S.A.)

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ABSTRACT

Recent collections document the presence of *Callirhoe papaver* (Malvaceae) in the Jackson Prairie region of southwestern Alabama. This species was last collected in the state during the 1870s and was designated as "historic" in the recent *Annotated Checklist of the Vascular Plants of Alabama* because the last known collection was from 1873. Here we describe the history of its collection in Alabama and its rediscovery in 2012.

RESUMEN

Colecciones recientes documentan la presencia de *Callirhoe papaver* (Malvaceae) en la región de Jackson Prairie del sudoeste de Alabama. Esta especie se colectó en el estado por última vez en los 1870s y fue designada como "histórica" en la reciente *Annotated Checklist of the Vascular Plants of Alabama* porque la última colección conocida era de 1873. Describimos aquí la historia de su colección en Alabama y su redescubrimiento en 2012.

The woodland poppy-mallow, *Callirhoe papaver* (Cav.) A. Gray, occurs in calcareous habitats along the southeastern Coastal Plain from Georgia and Florida, west to eastern Texas. It is considered uncommon and local in southwestern Georgia, northern Florida, Alabama, and Mississippi, while considerably more widespread west of the Mississippi River (Dorr 1990). In Mississippi and Alabama, it has been specifically attributed to the Pine Hills or Lower Pine Region in the southern portions of both states (Mohr 1901; Dorr 1990).

In a recent treatment of the Alabama vascular flora (Kral et al. 2011), *Callirhoe papaver* was treated as "historic" or not collected in over 100 years and was mistakenly omitted from the latest inventory of rare, threatened, and endangered species (ALNHP 2012). The 2012 rediscovery of *C. papaver* in Washington County, Alabama, reported here, is thus significant.

HISTORICAL SPECIMENS

Charles Mohr (1824–1901), in his monumental *Plant Life of Alabama* (Mohr 1901), listed *Callirhoe papaver* only from Healing Springs in northern Washington County. His citation "Herb. Geol. Surv. Herb. Mohr" was based on a single collection (UNA 10851; Fig. 1) that he made in July, 1873. "Herb. Geol. Surv." refers to the collection that Mohr made for the Geological Survey of Alabama upon which his book was based (Davenport 1978, 1979a, 1979b). That collection of over 4000 specimens, long maintained separately as the herbarium of the Alabama Museum of Natural History (ALU), is now incorporated into the University of Alabama Herbarium (UNA).

The ALU collection was started in late 1878, when Eugene Allen Smith (1841–1927), long-time Alabama State Geologist (see Henderson 2011), asked Mohr for help with his plant identifications. (Mohr's polite acceptance [Mohr 1878] of Smith's request is housed in the University of Alabama Special Collections.) Their collaboration soon led to the privately published *Preliminary List of the Plants Growing Without Cultivation in Alabama* (Mohr 1880). In that list, *Callirhoe papaver* was noted as occurring only in Washington County, with Mohr ("M") as its collector.

In contrast, "Herb. Mohr" refers to Mohr's much larger personal herbarium, which he bequeathed to the Smithsonian Institution (US) (Anonymous 1901). Two Alabama *Callirhoe papaver* specimens are currently found at US. The first (US 774668; Fig. 2) has two labels. The first, original label is affixed to the lower-left

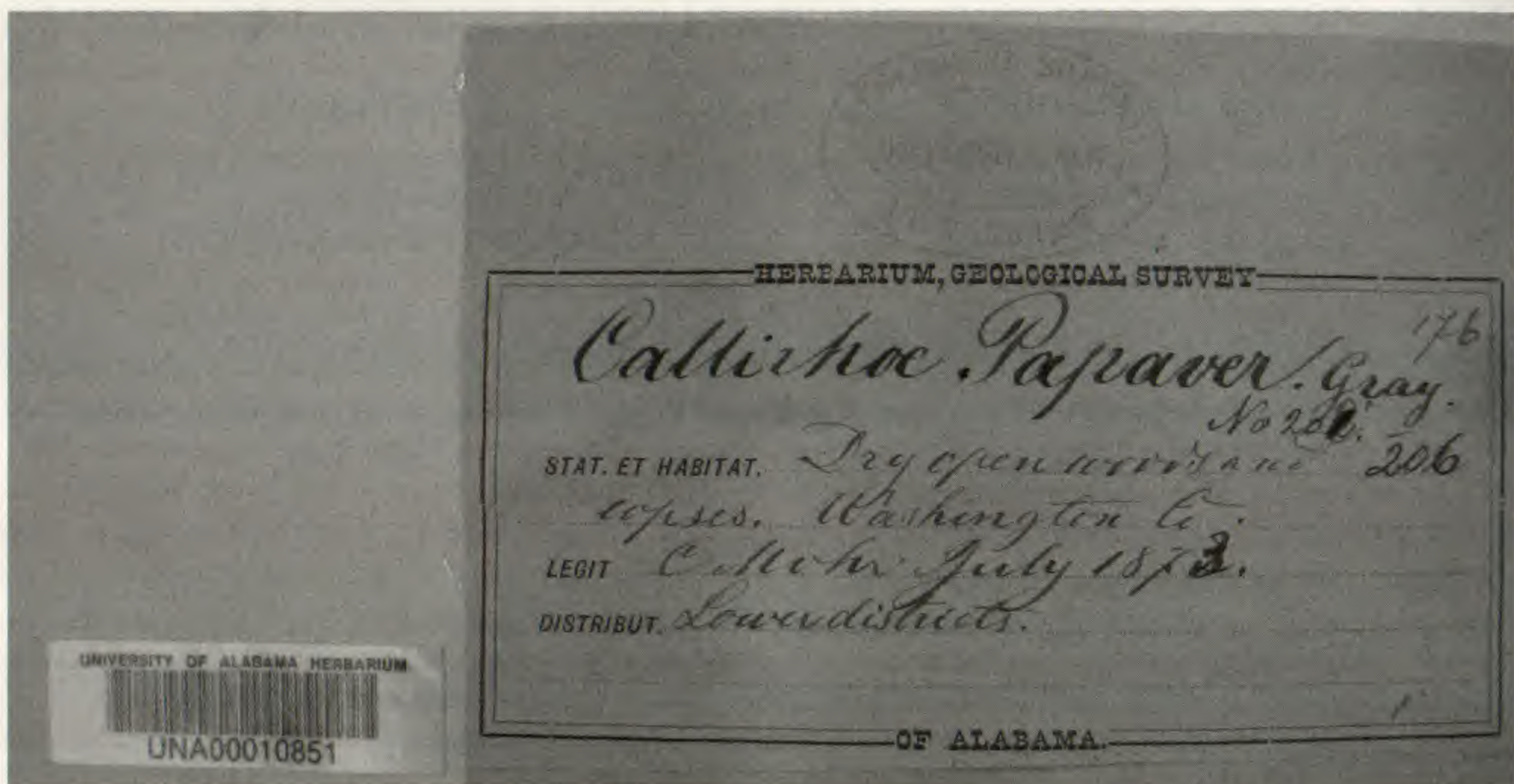


FIG. 1. Specimen label of *Callirhoe papaver* collected by Charles Mohr (UNA 10851): "Dry open woods and coves. Washington Co., C. Mohr, July 1873."

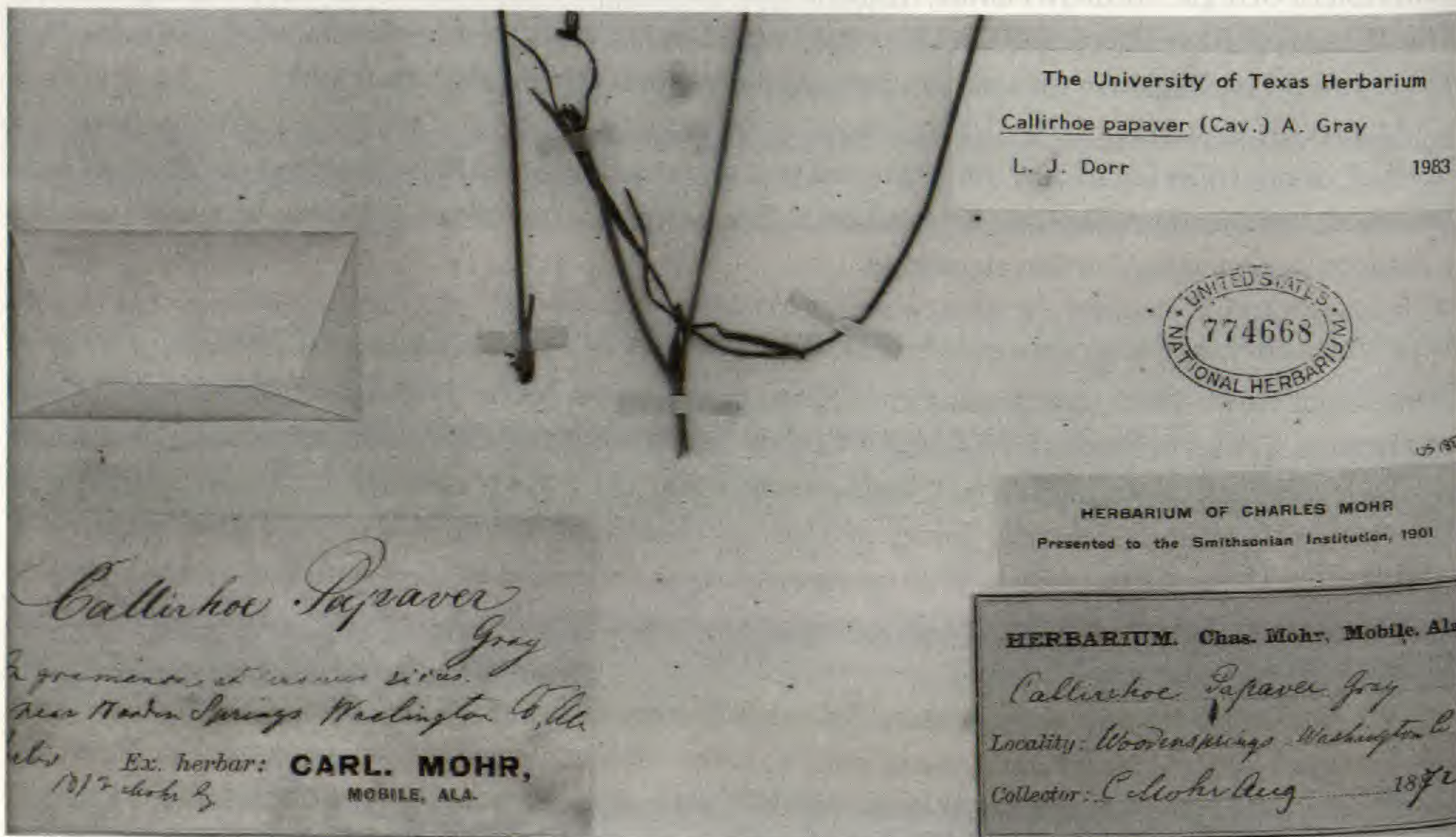


FIG. 2. Specimen labels of *Callirhoe papaver* collected by Charles Mohr (US 774668): "Woodensprings, Washington Co, C. Mohr, Aug 1872."

corner; it has a printed "Carl. Mohr" with the locality data and several sets of notes by Mohr, made at different times. The second label, placed in the traditional lower-right corner, is a newer one, copied by Mohr, with "Woodensprings, Washington Co" and "Aug 1872."

The above locality, subsequently recorded by Dorr (1990) as "Wooden Springs," is misspelled. Mohr, who sought the healing powers of mineral baths and more healthful climates throughout his adult life (Davenport 1978, 1979a), was most likely one of the first customers at a resort founded by William Wooten in 1872 (Sulzby

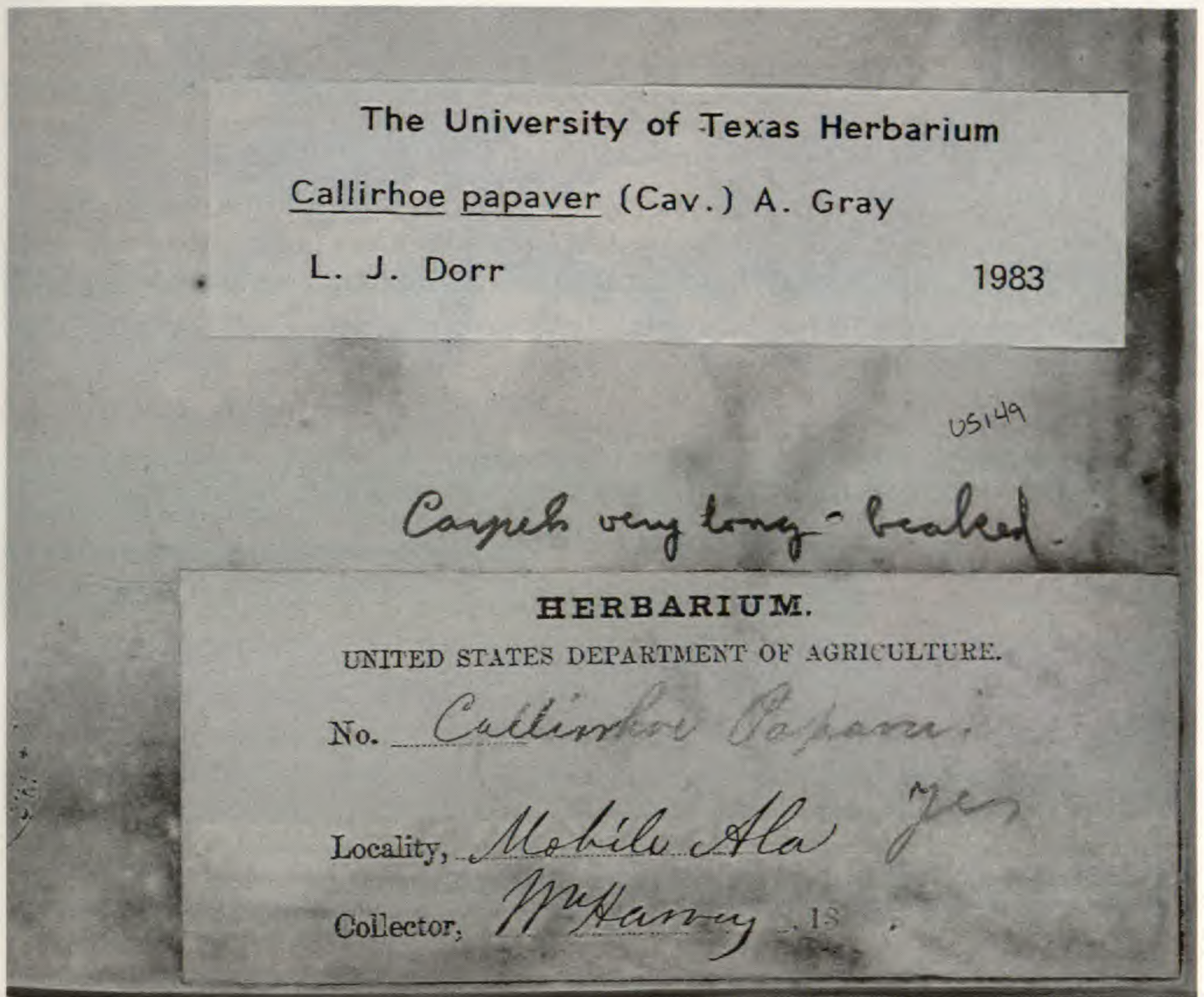


FIG. 3. William Harvey specimen (US 11818) of *Callirhoe papaver* with generic label in Charles Mohr's handwriting: "Mobile Ala, Wm Harvey [s.d.]"

1960; Foscue 1989). That resort, built around 17 small springs along a branch of Santa Bogue Creek in northern Washington County, Alabama, was perhaps initially known as "Wooten Springs" after the name of its developer, then changed to "Healing Springs" in order to attract more customers.

The second US specimen (US 11818; Fig. 3) lacks important details. The label is a generic one used at US during the late 1800s and was probably placed *ex post facto*. Thus, the species' identification, locality, and collector's name ("Mobile Ala; Wm Harvey") are clearly in Mohr's handwriting and not original notes by the collector. A significant omission is that no collection date is recorded on the label.

Who was "Wm Harvey"? An 1871 Mobile city directory lists a William Harvey as a route agent for the Mobile & Ohio Railroad (Ancestry.com 2011). Because no such person is listed in either the 1870 or 1880 United States Censuses, Harvey must have only lived briefly in Mobile. According to a U.S. Commissioner of Agriculture Affairs report (Watts 1875), that department received a "package of plants collected near Mobile, Alabama, by Mr. William Harvey" during 1874. Most likely, that package contained Harvey's *Callirhoe papaver* specimen—perhaps collected at a stop along the Mobile & Ohio Railroad line, which ran within 13 miles of Healing Springs.

Mohr probably didn't know about Harvey's collection at US until the 1890s. It was during that decade that he worked diligently on his flora of Alabama, and he visited US on several occasions (Davenport 1978, 1979a). During one of those visits, he must have been given Harvey's specimen to identify. On the label, Mohr wrote "Mobile" to indicate the collector's location and not the actual location of the specimen. Most importantly, he



FIG. 4. Jackson Prairie habitat of *Callirhoe papaver* (inset) in Washington County, Alabama; 20 Jun 2013.

did not include Mobile County—which lacks suitable calcareous habitat—as a *Callirhoe papaver* locality in *Plant Life of Alabama* (Mohr 1901). In his later monograph of the genus, Dorr (1990) attributed *C. papaver* to Mobile County by citing the Harvey specimen without knowledge of the specimen's history outlined above.

REDISCOVERY IN ALABAMA

During a 2012 botanical survey of the “Limestone” or “Jackson Prairie” region of southwestern Alabama, a collection of *Callirhoe papaver* was made by the first author in Washington County. The locality is ca. 4.2 miles NNE of Healing/Wooden/Wooten Springs, the only “original” Alabama locality. This population contained approximately 40 individuals.

In 2013, the above locality was revisited one year later. *Callirhoe papaver* and associated species seemed to be slightly delayed in flowering time from the previous year. Further exploration in 2013 (Keener *et al.* 7955) resulted in the discovery of an additional population of 10 individuals 3.4 miles ENE of the 2012 locality (Keener *et al.* 7344).

Voucher specimens: **ALABAMA. Washington Co.:** 3.8 air mi N of Millry, prairie W of Brier Creek, 31.69025°N, 88.31505°W, 24 Jun 2012, B.R. Keener 7344 with W.K. Webb (UWAL, SAMF, TROY, VDB); 4.3 air mi NE of Millry, along primitive private road ca. 1.6 mi E of jct. with Co. Rd. 45 (Mt. Carmel Rd.), 31.67720°N, 88.26003°W, 21 Jun 2013, Brian R. Keener 7955 with A.R. Diamond, L.J. Davenport & W.K. Webb (UWAL).

The soils of both sites are clay with occasional thin areas of exposed limestone. The *Callirhoe* plants grow in full sun or along the margin of prairie woods dominated by eastern red-cedar (*Juniperus virginiana* L.) (Fig. 4). Associated herbaceous species are *Asclepias viridis* Walter, *Echinacea purpurea* (L.) Moench, *Polygala boykinii* Nutt., *P. violacea* Aubl., *Silphium laevigatum* Pursh, and *Tripsacum dactyloides* (L.) L. Unfortunately, the sites are dominated by the invasive cogon grass, *Imperata cylindrica* (L.) P. Beauv.

In light of *Callirhoe papaver* being treated as “historic” and its “disappearance” from the Alabama flora since the early 1870s, the above collections are deemed noteworthy. While *C. papaver* is seemingly a globally secure taxon, it remains as one of Alabama’s rarest vascular plant species.

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